Remarks

The Office Action dated March 23, 2009 has been carefully considered. Claims 12, 15, and 19 have been amended without addition of new matter. Reconsideration of claims 12-22 is respectfully requested.

Claim Rejections – 35 USC § 112

In Paragraph 2 of the Office Action, claims 12-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 12, 15, and 19 have been amended to moot this rejection. Withdrawal of this rejection is respectfully requested.

Claim Rejections – 35 USC § 103

In Paragraph 6 of the Office Action, claims 12-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benecke et al. US 6,797,753 in view of Graham et al. US 3,803,072 and in view of Kuester et al. US 3,377,304. For the reasons set forth below, it will be shown that the references cited in Paragraph 6 do not disclose the present invention as set forth in the current claims.

The present invention refers to a plasticized polyvinyl chloride composition comprising: 100 parts by weight PVC, 0.1 per 100 parts by weight of a plasticizer comprising an isobutanol ester of a C8-C24 fatty acid with at least one hydroxyl group and a methyl ester of a C16-C18 fatty acid.

Benecke et al. discloses plasticizers from vegetable oils based on unsaturated fatty acids that are fully esterified with a monool or polyol and the fatty acids having all unsaturated bonds fully epoxydized (*cf.* abstract). The present invention however, discloses plasticizer compositions comprising an epoxydized isobutanol ester and a methyl ester of a fatty acid, which is not epoxidized. In addition, Benecke et al. teaches away from the present invention because it discloses plasticizers, which are all epoxydized. Column 6, line 54 *ff.* discloses that only these epoxidized plasticizers are minimally compatible with PVC resin, which is contrary to the present invention. In conclusion, no one skilled in the art would "add" a "normal" methyl ester to an epoxydized plasticizer for improved plasticization. Hence, for the foregoing reasons, Benecke et al. fails to disclose the present invention and in fact teaches away from the present invention.

Graham et al. discloses plasticized ethylene/vinyl chloride/acrylamide terpolymers and higher polymers thereof (referred to as "E/VCl/A"). According to column 1, lines 13 to 21, the list of plasticizers in Graham et al. does include conventional plasticizers for PVC, as concluded by the examiner, but only plasticizers particular for E/VCl/A polymers. In addition, PVC and E/VCl/A polymers are highly different in appearance, chemical and physical properties, and also shape. More specifically, PVC is a structural polymer used for making bottles, floors and a variety of other structured objects. On the other hand, E/VCl/A polymers are used as pigment binders and pigment coating compositions, adhesives, paints and in lacquers of paperboard (column 1, lines 6 to 9). Hence, it is logical that the needs and types of plasticizers are different, as the polymers are. Besides, one will also note that Graham et al. introduces several extensive lists of apt plasticizers for this E/VCl/A polymers (column 3, line 35 to column 8, line 5). Further, as the examiner correctly noted, Graham et al. does not expressly disclose the claimed

combination of the two plasticizers combined in the present invention. In view of the foregoing, the present invention is not obvious at all for one skilled in the art in view of Graham et al. Those skilled in the art would have to first pick the two most similar structures out of these extensive lists and second, to come to the structurally possibly similar esters of the present invention. Hence, one skilled in the art would disregard Graham et al., since it is directed to E/VCl/A polymers, and not PVC.

Kuester et al. is directed to plasticized PVC, wherein high oxirane fatty esters are employed. As set forth in the Office Action, Kuester et al. supports in column 1, lines 65 to 72 esters of fatty materials that contain a plurality of oxirane or epoxy groups. These may be considered somewhat similar to component b)-i) of the present invention. However, Kuester et al. introduces an extensive list of suitable plasticizers, which is not apt to turn to use of isobutyl fatty acid esters with 8 to 24 C atoms having at least one epoxy group obvious.

Moreover, Kuester et al. teaches away from the present invention. Kuester et al. does not mention component b)-i) at all, i.e., methyl esters of C16 to C18 fatty acid esters. Moreover, Kuester et al. suggests in column 4, line 6 ff., more specifically in lines 15 to 17, to employ the high oxirane content esters in combination with alkaline earth metal salts of a higher aliphatic organic acid. This co-compound is not the type of ester as described in claim 1 b)-ii) of the present invention. For the foregoing reasons, Kuester et al. does not disclose nor turn obvious the gist of the present invention.

In view of the foregoing amendments and remarks it is requested that the rejections of claims 12-22 under 35 U.S.C. 103(a) as being unpatentable over Benecke et al. in view of Graham et al. and in view of Kuester et al. be withdrawn.

Conclusion

In view of the amendments and remarks presented herein, Applicants submit that the present application is in condition for allowance, and such action is respectfully requested. If, however, any issues remain unresolved, the Examiner is invited to telephone Applicants' counsel at the number provided below.

Respectfully submitted,

/Philip P. McCann/

Philip P. McCann
Registration No. 30,919

SMITH MOORE LEATHERWOOD LLP
P.O. Box 21927
Greensboro, NC 27420
(336) 378-5302
phil.mccann@smithmoorelaw.com

Date: June 23, 2009

File No.: 5007447.061US1

CERTIFICATE OF TRANSMISSION

I HEREBY CERTIFY THAT THIS DOCUMENT IS BEING TRANSMITTED VIA EFS-WEB TO THE UNITED STATES PATENT AND TRADEMARK OFFICE ADDRESSED TO: **MAIL STOP AMENDMENT, COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450**, ON June 23, 2009
(Date)

Lorna D. Selvaggio
Name of Depositor

/Lorna D. Selvaggio/
Signature

June 23, 2009
Date of Signature